Flow Divider/Combiner Valves

<table>
<thead>
<tr>
<th>GPM</th>
<th>PSI</th>
<th>LPM</th>
<th>BAR</th>
<th>MODEL</th>
<th>PAGE</th>
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<tbody>
<tr>
<td>12</td>
<td>3500</td>
<td>45</td>
<td>241</td>
<td>DG-FDA</td>
<td>262</td>
</tr>
<tr>
<td>30</td>
<td>3500</td>
<td>114</td>
<td>241</td>
<td>SN-FDA</td>
<td>264</td>
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<tr>
<td>12</td>
<td>3500</td>
<td>45</td>
<td>241</td>
<td>DG-FDB</td>
<td>266</td>
</tr>
<tr>
<td>12</td>
<td>3500</td>
<td>45</td>
<td>241</td>
<td>DG-FDH</td>
<td>268</td>
</tr>
<tr>
<td>12</td>
<td>3500</td>
<td>45</td>
<td>241</td>
<td>DG-FDT</td>
<td>270</td>
</tr>
</tbody>
</table>

Typical Schematic

Typical application for the FDA, FDB, and FDH is to synchronize two independent cylinders or hydraulic motors in both directions.

Typical application for the FDT is to provide positive traction for vehicle transmissions. If one leg loses load, the valve insures flow to the other leg.
DG-FDA Flow Divider / Combiner Valve, Spool Type

DESCRIPTION
10 size, 7/8-14 thread "Delta Series", spool type, flow divider/combiner.

OPERATION
In the dividing mode, the DG-FDA will divert input flow from port (2) to ports (3) and (1), based on the ratio specified, regardless of operating pressure.

The DG-FDA will combine input flows from ports (3) and (1), to port (2) the same ratio.

Should circuit operation result in a blockage of either (3) or (1), the opposite port may also close under certain conditions. Should this potential exist, consult the factory.

FEATURES
- Hardened parts for long life.
- Industry common cavity.

VALVE SPECIFICATIONS
- Maximum Flow: 12 GPM (45 LPM)
- Accuracy on Flow Splits: +/- 10% of Max. Rated Inlet Flow
- Maximum Operating Pressure: 3500 PSI (241 bar)
- Viscosity Range: 36 to 3000 SSU (3 to 647 cSt)
- Filtration: ISO 18/16/13
- Media Operating Temperature Range: -40° to 250° F (-40° to 120° C)
- Weight: 21 lbs (.10 kg)
- Operating Fluid Media: General Purpose Hydraulic Fluid
- Cartridge Torque Requirements: 30 ft-lbs (40.6 Nm)
- Cavity: DELTA 4W
- Cavity Tools kit (form tool, reamer, tap): 40500002
- Seal Kit: 21191214

HYDRAULIC SYMBOL

PERFORMANCE
Actual Test Data (Cartridge Only)

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FLOW CONTROLS

DIMENSIONS

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ORDERING INFORMATION

DG-FDA - - - -

OPTIONS
Buna Standard 00
Viton Standard 0V

BODIES
Blank
N ¼" BSP Ports
S #6 SAE Ports

SPLITS 50 50-50

INLET FLOW
03 2-3 GPM (7.6 – 11.3 LPM)
06 3-6 GPM (11.3 – 22.6 LPM)
09 6-9 GPM (22.6 – 34 LPM)
12 9-12 GPM (34 – 45,3 LPM)

*Consult factory for Splits
Other then 50 - 50

(for bodies style and sizes see section “Accessories”)
SN-FDA Flow Divider / Combiner Valve, Spool Type

DESCRIPTION
16 size, 1 5/16-12 thread “Super Series,” spool-type flow divider/combiner valve.

OPERATION
In the dividing mode, the SN-FDA will divert input flow from port (2) to ports (3) and (1), based on the ratio specified, regardless of operating pressure.

The SN-FDA will combine input flows from ports (3) and (1), to port (2) same ratio.

Should circuit operation result in a blockage of either (3) or (1), the opposite port may also close under certain conditions. Should this potential exist, consult the factory.

FEATURES
- Hardened parts for long life.
- Industry common cavity.

VALVE SPECIFICATIONS
- Nominal Flow: 30 GPM (114 LPM)
- Accuracy on Flow Splits: +/- 10% of Max. Rated Inlet Flow
- Maximum Operating Pressure: 3500 PSI (241 bar)
- Viscosity Range: 36 to 3000 SSU (3 to 647 cSt)
- Filtration: ISO 18/16/13
- Media Operating Temperature Range: -40° to 250° F (-40° to 120° C)
- Weight: .95 lbs. (.43 kg)
- Operating Fluid Media: General Purpose Hydraulic Fluid
- Cartridge Torque Requirements: 90 ft-lbs (122 Nm)
- Cavity: SUPER 4W
- Cavity Tools kit (form tool, reamer, tap): 40500019

PERFORMANCE
Actual Test Data (Cartridge Only)

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DESCRIPTION
10 size, 7/8-14 thread “Delta Series”, spool type, flow divider.

OPERATION
The DG-FDB will divert input flow from port (2) to ports (3) and (1), based on the ratio specified, regardless of operating pressure.

Should circuit operation result in a blockage of either (3) or (1), the opposite port may also close under certain conditions. Should this potential exist, consult the factory.

FEATURES
- Hardened parts for long life.
- Industry common cavity.

VALVE SPECIFICATIONS
- Maximum Flow: 12 GPM (45 LPM)
- Accuracy on Flow Splits: +/- 10% of Max. Rated Inlet Flow
- Maximum Operating Pressure: 3500 PSI (241 bar)
- Viscosity Range: 36 to 3000 SSU (3 to 647 cSt)
- Filtration: ISO 18/16/13
- Media Operating Temperature Range: -40° to 250° F (-40° to 120° C)
- Weight: .21 lbs. (.10 kg)
- Operating Fluid Media: General Purpose Hydraulic Fluid
- Cartridge Torque Requirements: 30 ft-lbs (40.6 Nm)
- Cavity: DELTA 4W
- Cavity Tools kit (form tool, reamer, tap): 40500002
- Seal Kit: 21191214

PERFORMANCE
Actual Test Data (Cartridge Only)

HYDRAULIC SYMBOL

Do not exceed maximum flow per model

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**FLOW CONTROLS**

**DIMENSIONS**

(for bodies style and sizes see section “Accessories”)

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>DG-FDB</th>
<th>OPTIONS</th>
<th>BODIES</th>
<th>SPLIT</th>
<th>INLET FLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buna Standard 00</td>
<td>Blank Without Body</td>
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<td>2-3 GPM (7.6 - 11.3 LPM)</td>
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<td></td>
<td>Viton Standard 0V</td>
<td>N 3/8” BSP Ports</td>
<td>50-50</td>
<td>3-6 GPM (11.3 - 22.6 LPM)</td>
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</tbody>
</table>

*Consult factory for Splits

Other then 50 - 50

<table>
<thead>
<tr>
<th>SPLIT</th>
<th>03</th>
<th>06</th>
<th>09</th>
<th>12</th>
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</thead>
<tbody>
<tr>
<td>2-3 GPM</td>
<td>3-6 GPM</td>
<td>6-9 GPM</td>
<td>9-12 GPM</td>
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<tr>
<td>(7.6 - 11.3 LPM)</td>
<td>(11.3 - 22.6 LPM)</td>
<td>(22.6 - 34 LPM)</td>
<td>(34 - 45.3 LPM)</td>
<td></td>
</tr>
</tbody>
</table>

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DG-FDH Flow Divider / Combiner Valve, Spool Type

DESCRIPTION

OPERATION
In the dividing mode, the DG-FDH will divert input flow from port (2) to ports (3) and (1), based on the ratio specified with a high degree of accuracy, regardless of operating pressure.

The DG-FDH will combine input flows from ports (3) and (1), to port (2) the same ratio.

Should circuit operation result in a blockage of either (3) or (1), the opposite port may also close under certain conditions. Should this potential exist, consult the factory.

FEATURES
- Hardened parts for long life.
- Industry common cavity.

VALVE SPECIFICATIONS
- Maximum Flow: 12 GPM (45 LPM)
- Accuracy on Flow Splits: +/- 4% of Max. Rated Inlet Flow
- Maximum Operating Pressure: 3500 PSI (241 bar)
- Viscosity Range: 36 to 3000 SSU (3 to 647 cSt)
- Filtration: ISO 18/16/13
- Media Operating Temperature Range: -40° to 250° F (-40° to 120° C)
- Weight: .21 lbs. (.10 kg)
- Operating Fluid Media: General Purpose Hydraulic Fluid
- Cartridge Torque Requirements: 30 ft-lbs (40.6 Nm)
- Cavity: DELTA 4W
- Cavity Tools kit (form tool, reamer, tap): 40500002
- Seal Kit: 21191214

HYDRAULIC SYMBOL

PERFORMANCE
Actual Test Data (Cartridge Only)

Performance graphs showing flow (GPM or LPM) versus pressure drop (PSI or BAR).

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FLOW CONTROLS

DG-FDT Flow Divider / Combiner Valve, Spool Type

DESCRIPTION
10 size, 7/8-14 thread “Delta Series”, spool type, flow divider/combiner, positive traction valve.

OPERATION
In the dividing mode, the DG-FDT will divert input flow from port (2) to ports (3) and (1), based on the ratio specified, regardless of operating pressure.

The DG-FDT will combine input flows from ports (3) and (1).

Should circuit operation result in a blockage of either (3) or (1), the opposite port may also close under certain conditions. Should this potential exist, consult the factory.

FEATURES
- Hardened parts for long life.
- Industry common cavity.

VALVE SPECIFICATIONS
- Maximum Flow: 12 GPM (45 LPM)
- Accuracy on Flow Splits: +/- 10% of Max. Rated Inlet Flow
- Maximum Operating Pressure: 3500 PSI (241 bar)
- Viscosity Range: 36 to 3000 SSU (3 to 647 cSt)
- Filtration: ISO 18/16/13
- Media Operating Temperature Range: -40° to 250° F (-40° to 120° C)
- Weight: 22 lbs. (.10 kg)
- Operating Fluid Media: General Purpose Hydraulic Fluid
- Cartridge Torque Requirements: 30 ft-lbs (40.6 Nm)
- Cavity: DELTA 4W
- Cavity Tools kit (form tool, reamer, tap): 40500002
- Seal Kit: 21191214

PERFORMANCE
Actual Test Data (Cartridge Only)

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